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# SCHOOL AND SOCIETY

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EDITED BY J. McKEEN CATTELL

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# SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

WITH WHICH IS COMBINED THE

## EDUCATIONAL REVIEW

EDITED BY WILLIAM McANDREW

Volume XXXI | SATURDAY, APRIL 12, 1930 | Number 798


## CONTRIBUTIONS OF PSYCHOLOGICAL RESEARCH TO EDUCATION[1]


By Professor ARTHUR I. GATES

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PERHAPS the best evidence that psychology has made substantial contributions to education is the fact that one finds it impossible to survey them all, even briefly, in a forty-minute paper. It therefore becomes necessary to confine one's remarks to a brief presentation of a few main types of contributions.

It may be said, I believe, that psychology has in substantial measure influenced education, first, by introducing the scientific method as the main means of study; secondly, by introducing a point of view concerning human nature which has proved fundamental to modern educational philosophy; thirdly, by developing and applying an important body of scientific principles to particular educational theories and practices, and finally, by contributing a number of useful professional techniques and instruments. In commenting briefly on these four types of contributions I hope to suggest something of the present status and future prospects of educational psychology.

### PSYCHOLOGY'S INFLUENCE IN INTRODUCING THE SCIENTIFIC METHOD INTO EDUCATION

First in importance among the contributions is the large share which psychology has had in inducing education to place its faith in scientific study, rather than in crudely controlled experience, observation and speculation, or in mere authority. The newer generation in education is decidedly scientifically minded. There is evidence of this on all sides. Positions of leadership are being assigned in increasingly large proportions to men and women of scientific training. The rapid development of professional schools of education in the great universities is due largely to the fact that the curriculum is being based in increasing measure upon the data of science and to the fact that men of scientific temper are available for the chairs. Evidence of the degree to which scientific training has been offered and accepted is found in the rapid growth of the demand from the schools for the results of scientific appraisals and the services of men of scientific training. During the last quarter century there has been an enormous increase in the number of departments of statistics and research in the school systems. Scientific journals have sprung up and are both read and respected. Scientific societies, such as the one under whose auspices we meet to-day, are increasing in number and strength. In recent years, the large foundations have seen fit to support scientific study in edu-

[1] An address read before the American Research Association at Atlantic City, February 26, 1930.

cation nearly as liberally as in other fields. The yearbooks of the various educational societies now record the advances of experimentation, instead of speculative panaceas and opinions. Quacks, faddists, sentimentalists and the propagandists are beginning to suspect that all school people are from Missouri. Few, if any, professional groups have welcomed the fruits of scientific study more warmly than the schoolmen. Despite the short history of educational science, it is probable that educators seek and respect their science more than lawyers, salesmen, bankers, editors and preachers, and quite as much as doctors, architects and engineers. The educational world has been made safe for science.

This development of scientific-mindedness and of respect for scientific enterprise has come about so rapidly that most of us have failed to realize that it is here. In producing this change, psychology has, directly and indirectly, played a conspicuous part. Any one who believes, as I do, that the methods of science will be as fruitful in education as they have been in many other fields will agree that in producing a favorable attitude toward science and some measure of scientific-mindedness psychology has made its greatest contribution to education.

### PSYCHOLOGY'S CONTRIBUTION TO EDUCATIONAL PHILOSOPHY

Second in importance, I have placed the influence of psychology upon educational philosophy. It is well known that the development of the "new" philosophy since 1890 has been one of the most important episodes in the history of education. This philosophy has been in a very large measure an application of psychology. This philosophy has assumed a fundamental point of view and is primarily defended by facts and principles developed largely within psychology. It is a significant fact that most of the leaders in educational philosophy since the birth of psychology in America either were first trained in psychology or adopted it early in their career. G. Stanley Hall was one of the founders of scientific psychology in America. John Dewey's first volume was a text-book in pure psychology. William James, whose influence in education has been immense, was a psychologist first and a philosopher later. Professor Bagley took his doctorate in a psychology of the purest strain. Professor Kilpatrick is one of the most skilful teachers and appliers of psychology in my acquaintance. Professor Bode is one of the most critical writers on psychological topics. If the genetic psychologists are right that first learnings are most significant, most of these leaders are more psychologists than philosophers, because they were psychologists first. Perhaps these men themselves can be claimed as contributions of psychology to education. If so, they are psychology's greatest gift.

Through these men and others, the point of view concerning human nature which developed in American psychology after 1880 was brought to bear upon education. This point of view has been of enormous significance. Beginning with Hall, James and Dewey, all of whom were greatly influenced by Darwin, the older concept of mind and of intellectualism went through a radical change. To-day the mind is not conceived in psychology as an entity which exists apart from the body, or as an agency superimposed upon the body as a kind of guide and master. We do not now consider a human being as exclusively or even primarily a machine guided by a rational agency. Thinking, for example, is a form of adjustment to be placed amid, and not as a power above, sensing cold, feeling anger, fighting, running, striving to avoid a myriad of irritating stimuli. Education, therefore, has been called upon to understand not merely the logic of subjects and

minds, but the possibilities and limitations of human organisms. It is called upon not to train the mind, but rather to guide the development of a complex organism.

This new conception pointed squarely to the need of scientific study of human organisms. It made the child, not the child's mind or the mental apparatus, such as textbooks and mental exercises, the main object of study. It produced the child-study movement initiated by G. Stanley Hall and now progressing more vigorously than ever before. It led to the overthrow of the old theory of mental faculties and its colleague, formal discipline, which no one except an occasional college president now supports. It resulted in a complete reorganization of the principles of learning by making hungers, cravings, emotional dispositions and other fundamental urges of an organism the initiating, sustaining and directing forces in learning. It led to the study of the amount and educational significance of individual differences. It led to new conceptions concerning the subtle character of the sources and incentives, and the devious ways of mental adjustments, fortunate and unfortunate. The new conception led, in short, to a series of facts and principles which, when applied broadly to the more complex problems of modern life and preparation for it, comprise no mean portion of educational philosophy.

At this point it would be proper to acknowledge that the leaders in educational philosophy have been blessed by giving as well as by receiving. The contributions of educational philosophers to psychology have been great. But this topic was not my assignment. However, I do wish to emphasize the fact that the outstanding contribution of the past generation to education has been the result of a close union of psychology and educational philosophy, and to deplore the fact that certain persons, fortunately still few, seem disposed to disturb this happy relationship.

## The Need of Cooperation between Educational Philosophers and Educational Psychologists

At a time when an adequate philosophy of education is most needed, at a time when psychology should be making available for philosophy the maximum of encouragement and the most abundant materials, some men of science are disposed to challenge the validity of philosophy as a method of study in education and to try to assume the philosopher's post. Already placed on the defensive, occasional philosophers retort in kind. Arguments and epithets fly back and forth. One writer has recently been trying to make capital of the misleading notion that science is concerned only with what is and the philosopher only with what ought to be. The philosopher again declares that science is a program of discovering more and more about less and less, and the scientist replies that philosophy is the business of finding less and less about more and more. The scientist declares that the philosopher is a person who tries to think without doing experimenting, and the philosopher retorts that the scientist is a person who does experiments without thinking. If these distinctions were valid, Hall, Dewey, James, Kilpatrick, Bagley, Bode, Terman, Judd and others would be helpless victims of mental conflict or dual personalities.

This rivalry is unfortunate and unproductive. What we need is not conflict but cooperation. The philosopher should realize that science is a method, *par excellence*, for discovering certain facts and principles which are the indispensable data for philosophic use and test. The scientist should appreciate the fact that the greatest generalizations may be conceived by those who, freed from the detailed labors of technical research, can devote themselves exclusively to generalizing. They should realize that the scientific facts and prin-

ciples require not only verification by test within the limits of each science, but also the test of application to all other fields of knowledge. They should realize, too, that generalizing from the generalizations of all sciences is something that a person limited to one field of science is not in a position to do. This sort of supergeneralization is the business of philosophy. In an enterprise like education, more science is needed to enable philosophy to avoid superficiality, and more philosophy is needed to keep science from becoming too narrow. To achieve both breadth and thoroughness most adequately, philosophy and science should cooperate. Each can, if it will, immeasurably enrich and facilitate the other.

### CONTRIBUTIONS OF PSYCHOLOGICAL RESEARCH TO PARTICULAR PRACTICES IN EDUCATION

Some of my colleagues will be annoyed with my judgment in putting the contributions of psychological research to the reform of particular educational practices in a position of third importance. This arrangement is not so disrespectful as it seems, since many of these contributions have been of prime importance in fostering among educators a respect for the scientific method and in providing substance for a philosophy of education. Time permits only two illustrations of contributions to educational practice.

The first of these is an illustration of the way in which a variety of discoveries, which seem individually to be highly technical or academic, may be combined by a person with sufficient insight in such a way as to influence practice profoundly. In the seventies Duval discovered that the eye during reading skips along like a grasshopper in a series of leaps and stops. In the eighties Cattell discovered that at each stop the organism may perceive as a unit a whole "eyeful" of words provided they form a thought unit. A little later Cattell's students and Judd and his students uncovered further facts about the mechanics of eye-movements and reading. Thereafter, Judd and his colleagues in the laboratory at Chicago pursued a host of investigations of many phases of the mechanics of reading from the first grade to the graduate school. From the combination of these many particular facts and principles with discoveries concerning the process of perception, understanding and mental growth, new methods of teaching reading have issued. Compared to procedures in common use before 1900, these methods are really radically different and immensely superior, both in the proficiency and the satisfaction which they provide for the learner. These contributions are of prime importance historically, because their validity and professional usefulness none can deny. Until our eyes evolve into telepathic instruments, these works will serve us.

### THE PRINCIPLE OF GENERALIZATION AND TRANSFER

The second example of the influence upon education of principles developed in psychology is of a different type. It is a case of causing a revolution by a single stroke with the experimental shillalah. I refer to the effects of the first studies of the "transfer of learning." The first studies of the spread of the effects of formal training did two things. They demonstrated beyond doubt the error of the old theory of mental faculties and the theory of formal discipline. Two experimental studies by Thorndike and Woodworth shook the educational edifice to its very foundation. They offered, in the place of the time-honored theory of formal discipline, a theory to account for the transfer of the results of training which were manifest. The first influence was destructive; the second, eminently construc-

tive. The first is understood, remembered and acted upon, but, unfortunately, the second is less frequently remembered and well grasped. It is my belief that within a decade or two the reverse will be true. The contribution then to be mainly honored will be the results of wide-spread application of the positive principles of transfer. Even now, they are beginning to appear.

Many students have appeared to believe, indeed many now seem to assume, that the denial of the validity of the faculty theory and the old dogma of formal discipline is the same as a denial of the possibility of transfer of experience from one situation to others. Since it is true that this psychology teaches us that the process of learning is the process of establishing a reaction of an organism to a concrete situation, it is sometimes assumed that the response established is specific, that it is forever bound in all its elements to that specific situation. It is urged therefore that the curriculum be determined by selecting a series of situations which the world will most frequently offer, and that the school see to it that each child acquires a serviceable response to these specific situations. Thus, in spelling, some have assumed that the golden rule is to select the three or four thousand words which children and adults will most frequently need to write, and then to teach the pupil to write correctly these words one by one. The learning of each word, it is assumed, is to be made a specific achievement. The learning of each is expected to contribute nothing to the learning of others. Indeed, each is often taught in such a setting and in such a manner as to discourage transfer and reduce it to a minimum. Such conceptions are inadequate interpretations of the experiments, the facts and the principles of transfer. "Specific adaptation" has been misinterpreted as "specific learning"; the denial of "formal discipline" has been misinterpreted as a denial of "functional transfer." The truth is that while some adaptation to a new situation is required, the transfer of experience is genuine and often substantial. A man who has driven one car knows that, when he first attempts to drive another make of car, he must make some adaptations to the new machine, but he knows equally well that he need not learn all over again. He knows, furthermore, that it is easier to shift to certain new cars than to others, that some people make the shift better than others and that certain kinds of experience and education with the first car make the transfer of learnings more abundant than others. He knows that the amount of transfer is a function of conditions and methods. On the other hand, it must be recognized that the presence of transfer, even in great amount, does not imply the validity of the old theory of formal discipline. It is forever dead.

From the beginning, some of those instrumental in the destruction of the theory of formal discipline have made available a series of principles which would serve as guides to making the transfer of training as abundant as possible. For example, principles of learning originally formulated by Thorndike are primarily designed to secure conditions which foster transfer. Some of these principles are a little complex, some are a little difficult, many have been reformulated; but they are not, and never were, misleading or impotent. These principles aim to describe the conditions that must be fulfilled to make transfer and generalization possible and abundant. The scheme, in harmony with the principle of parsimony, reduces transfer and generalization to the same terms. It prefers to explain generalization and to describe the conditions which make it possible, instead of merely praising the name and asserting its importance. These principles have

failed signally to be utilized chiefly, I believe, because they were phrased in somewhat unusual terms. To put them to work is one of the outstanding needs of the time. Adequately to put these principles into effect would result in an incalculable increase in the effectiveness of education.

The studies on transfer have had far-reaching effects. For example, the overthrow of the theory of formal discipline stimulated, and the establishment of the theory of transfer justified, the modern enterprises of curriculum construction—that is, of selecting material and activities for the curriculum—which has recently become the most conspicuous educational interest. The interest is admirable and much of the work is promising. There is evidence, however, that some of it is conceived too narrowly. Some of it has been distinctly hasty. Not a little is based upon an incomplete utilization of the principles of generalization and transfer. Some of it is actually threatening to bring the whole movement into disrepute. There is real danger that hasty workers in this field may kill the goose that might lay golden eggs.

### THE NEED OF PSYCHOLOGICAL ENGINEERS

Tracing the history of such a concept as the principle of transfer leads me to mention what is probably the most outstanding weakness in the joint enterprises of education and psychology. It is rather customary to say that the main weakness lies in the small number and uncertain validity of the general psychological principles. Foreign psychologists visiting this country are prone to remark upon the highly practical and professional character of psychology—to be amazed at the degree to which psychology is being applied in selecting materials for the curriculum, improving methods, measuring educational attainments, mental capacities, vocational talents and the like. They, and many persons at home, are disposed to feel that application is running ahead of discovery of principles. Without minimizing the need of improvement in the general science, which is an indispensable prerequisite of continued growth, I am disposed to dissent from this view. I believe our greatest present need is for thorough and valid application of principles now at hand to many different educational situations. I believe that there is not a single school subject, not even the simplest, which is taught in such a way as to take advantage of principles of generalization or transfer that have been stated and restated in text-books for at least twenty years. While the principles of individual differences are well known, scarcely a beginning has been made in applying them. They are not applied by such crude administrative devices as dividing a hundred children of a grade into three sections or accelerating pupils by jumping grades. While these practices, intelligently executed, are better than no adjustment at all to individual differences, they are not, and can not be, even approximately satisfactory means of putting the principles into professional operation. All along the line, education is teeming with problems, awaiting some one sagacious enough to apply to them principles of psychology now available.

As it is easier to teach psychology than to learn it, so it is easier to learn it than to apply it. It should never be assumed that once one learns psychology, he should be able by a simple mental operation to apply it to the teaching of spelling or the cultivation of character. Applying psychological principles to complex, practical situations is an extremely difficult task. It is far more difficult than the work done by most "pure" psychologists. It is a field for the most expert service. It is, in my opinion, a seriously neglected field. There is an acute need for men who occupy between education and psychology a position similar to that which the engineer occupies between

industry and physics. We are short on psychological engineers. Psychology, like physics, should have engineers like Edison as well as philosophers like Bertrand Russell and scientists like Millikan.

This dearth of psychological engineers has resulted in slow and disappointing advances in many fields to which psychology has much to offer. After an auspicious beginning, work in vocational selection and guidance, although admirable in certain respects, seems to be lagging far behind its theoretical possibilities. Mental hygiene, which is obviously a field for special applications of the principles of learning and techniques of psychological measurement, is still in so unsatisfactory professional health that it has become almost a joke among leading psychologists. Some of our so-called "mental and educational testers" resemble a four-months-old infant, who is fascinated with each new tool handed to him but has little idea what to do with it except to play with the tool itself. This point introduces the next topic which I wish to pursue, namely, psychology's contribution of tools and techniques to education.

## Psychology's Contribution of Tools and Techniques to Education

Binet's intelligence test is perhaps the most significant of the professional instruments invented by psychology. The illustrious character of Binet's achievement becomes more apparent as a quarter of century of diligent and able research fails to produce a better type of test. A highly significant feature of the research in this field has been its objective, aboveboard method. The probable errors of a Binet IQ measurement are published in quantity. Any one in education can easily discover how much the IQ tends to vary from test to test. An illuminating exercise for any educationist to undertake is to secure equally open and objective data concerning the probable error of the physician's diagnosis and prediction of general physical status, of the condition of the endocrine glands or the presence and significance of focal infections at the roots of the teeth. It is probable that he will discover the latter data harder to find and more difficult to interpret than the former. The fact is that the individual intelligence test results when secured by an expert show a definiteness, a clearness of expression and a reliability that are rarely surpassed in professional appraisal of any components of human make-up.

In educational measurement, progress since 1910 has been rapid. The measurement of educational attainments is well advanced, and the objective appraisal of many other types of human abilities is well under way. The measurement of fair-mindedness by G. B. Watson and of honesty and deceit by May and Hartshorne are samples of achievements which make us confident that nothing more than sufficient opportunity and ingenuity are required to develop practically useful measures of the most subtle human interests, attitudes or other behavior tendencies.

Means for predicting during early years the amount and kind of education, the type of reactional, vocational and social preparation which will enable each child to develop in the happiest and socially most productive manner now lie almost within our grasp. All that is needed is a number of expert hands. The persons who deny this possibility are the brothers in spirit of the people who laughed at the proponents of the practical possibilities of the aeroplane and the radio.

Psychologists began their work in measurement with an intense and determined effort to perfect their tools—their tests and techniques. They assumed that, could they devise valid and useful tools, these instruments would be put to abundant use. Being a specialist in the technical art of tool construction, the expert in tests and measurement often lacked time and ability to

work out the optimum applications. This, it was said, was the job of the professional worker in the field. The educator in the field rarely had the training in, and understanding of, the principles of testing necessary to make the applications. He therefore accused the scientist of being interested and competent only in making tests and testing tests, and not in making tests professionally useful. The test-maker usually had the double job of trying to be a scientist while training all the engineers as well. Here in the fields of testing, as in the field of learning, our weakness is in lack of enough competent people in the go-between position—psychological engineers, specialists in applying the tools and techniques of measurement to problems in education.

Even with these shortages in personnel, tests and measurements are becoming increasingly valuable in education. Tests have already been applied successfully to the diagnosis and remedial treatment of educational difficulties. This is especially true in the case of difficulties in the elementary school subjects, such as arithmetic, reading and writing. Well-trained diagnosticians can discover sources of ills in these subjects and suggest remedies, even now, with a thoroughness and reliability equal to that of typical doctors of medicine. Our difficulty, on the whole, is that the same proficiency is not yet possible in many other, even more important, types of educational and mental ills, and that even in the most developed types of diagnosis few people are trained. The abundant harvest of the science of educational and mental measurement and diagnosis is yet to be reaped.

### THE ALLEGED INSTABILITY OF PSYCHOLOGICAL PRINCIPLES

Professional workers in education often profess to be embarrassed by what appears to be a sort of instability among psychologists. Psychologists seem to be changeable or even radical. This is due partly to the fact that psychology is influenced by the unrest of its youth and partly to the fact that there exist so many unexplored fields. The tendency of youth to become unduly enthusiastic about a new idea exerts an influence. Consequently, we have a series of enthusiastic crusades under such banners as introspectionism, behaviorism, reactionism, Freudianism, Gestaltism. We also have movements to adopt wholesale the explanatory principles of biology, neurology, reflexology or psychoanalysis. The interesting fact about these runaways is that sooner or later they tend to come back to the old home, which is psychology, and no particular *ism*. They usually come back, not with the frankness of the prodigal son, but more or less in disguise. An illustration and an appraisal of two or three of these adventures will perhaps be appropriate on this occasion, since the speaker wishes to suggest that the best thing for educators to do is to prefer the hospitable and abundant board of the good old science to the uncertain adventures of the isms.

Behaviorism is a case in point. The original behaviorists were discontented and rebellious. They were filled with the ecstasy to reform. Where the household of psychologists urged temperance in matters of introspecting the spirits of consciousness, the behaviorists demanded complete prohibition. John Watson was psychology's "Volstead," who, failing to add a prohibition amendment to the constitution of psychology, set up his own house and gathered in such followers as he could. That house soon became the center of the most prolific bootlegging industry in the psychological realm. Conscious data, prohibited at the front door, were accepted at the back door when disguised as implicit language reactions, verbal activities or in other ways. The behaviorists, on the whole, now live on the same fare as other psychologists, except that the psychologist is less in danger of intemperance

and intoxication because he uses a standard brand of spirits and never deceives himself into thinking that wine is water. A psychologist can do well either by temperate use of subjective methods or by total abstinence. He can have only a deleterious influence when he uses bootleg stuff while claiming to be a teetotaler.

Psychoanalysis of certain brands is another ism. The Freudian school would paraphrase Shakespeare, badly, as follows:

All the world's a sanitarium,
And all the men and women merely patients.
They have their repressions and their complexes.
And one man in his time plays many parts,
His acts being sexual symbols.

To escape this possibly happy but unproductive state of spending our lives in swapping snappy symptoms we must psychoanalyze the psychoanalyist. When we do so, we find that psychoanalysis is itself a complex that needs to be cured. Once all the symbolism of Freudianism is removed, we find remaining a healthy and useful idea. It is the idea that human behavior is initiated and directed by motives that are subtly concealed. This, I believe, is the substance of the Freudian contribution. It is a very important contribution. Psychoanalysts returning to the fold of psychology and intent to follow its more rigorous methods will in time pursue this conception to a rich professional issue.

A less well advertised adventure, one approved by a larger number of standard psychologists, was the rush to the Klondike of neurology. Here were promised mines of golden truths about the close dependence of mind and behavior upon circumscribed brain areas. It was promised that huge nuggets could be dug out of any section of the brain to which a prospector might wish to lay claim. For several decades good men and true have dug diligently. But one prospect after another proved illusory. The psychologist went on digging, however, supported by faith, hope and perhaps at times by charity. Recent reports are that the field will be abandoned, or at least that something less precious than gold should be sought. Most of the prospectors are returning to tend the plows of psychology.

When psychology broke with older religious concepts, it was said to have lost its soul; when it parted company with the old philosophic dualism, it lost its mind; when it discovered the deceitfulness of systematic introspection, it lost its consciousness, and now that it has found neurology to be a futile aid, psychology may completely lose its nerve.

### The Immaturity of Psychology

The situation would be serious were psychology not still young, and had it not saved up a little nest-egg of its own currency. Whereas philosophy and some of the sciences must state their age in centuries, psychology's span is that of comparatively young men. There was no organized science or laboratory of psychology in the world when Thorndike, Judd and Terman were born. There was little application of psychology to education when these men received their doctorates. Psychology is surely young enough to recover from such moderate disappointments and disputes as it has had. Perhaps it has sown its wild oats and is now mature enough to settle down to its own business. The best contributions to education are yet to come.

# PRODUCTIVE SCHOLARSHIP

By Professor A. S. PEARSE

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WHY are not professional scholars more productive? Why is it that so few scholars do things? Why do professors who teach literature and the technique of composition

so rarely write short stories or novels? Newspapers train more writers than universities. The men who are seeing great visions are not those whom the world regards as scholars. In fact, some of them are almost vulgarly unlearned. Edison, Burbank, the Wright brothers, Galsworthy, Kipling, Shaw, Mary Baker Eddy, Rockefeller, Ford and Rosenwald had, and have, no connection with formal learning. Charles Darwin had to be urged to continue his courses in the university, and he found them very irksome. John Muir left college after two years, rather disappointed with academic atmosphere. Pasteur and Lister are not known primarily as scholars, but as discoverers. Why are not those who have most comprehensive knowledge the most productive? Scholars do many useful and clever things but not great things. Why?

There are certain essentials for production. Knowledge comes from scholars. The fact-holding books in the libraries have been largely written by teachers who, after accumulating knowledge to present to their students, wrote a summary of what they had acquired and thus brought their fields of learning up to date. The doers in the world can easily get the facts they need. Courage is essential for accomplishment—courage to endure danger, ridicule, discouragement, the drudgery of eternally reading to keep up to date, and many defeats for a single victory. Interest in the thing attempted must, with courage, carry endeavor on and on to success. This depends upon temperament, age, training and outlook. These give a man faith in the importance of his work. Industry must keep a man always at his task. The world belongs to those who work. Care is essential. Good work comes with habits of "eternally taking pains." Open-mindedness permits a man to consider all roads which may lead to a goal. Opportunity must place a man in the proper setting for his work. Most men, to-day more than ever before, can, if other essentials are present, make their own opportunity for attaining their heart's desire. Desire to accomplish something must furnish a continual spur. Such an incentive may be simple or grand—a desire to make a living, the love of a wife, the respect of a child, a longing for fame or wealth, a love of all mankind, an inborn urge to advance knowledge or solve practical problems. A happy combination of knowledge with courage, interest, industry, care, open-mindedness, opportunity and desire to accomplish something may, in a favorable environment, lead to a great work. Why does such a work rarely come from a scholar?

As one scholar with another the writer now attempts, with all humility, to enumerate for the readers of SCHOOL AND SOCIETY the chief reasons for the backwardness of scholars in doing the big things in the world. There may be a thousand such reasons, but, with an eye on the editor's blue pencil, we shall have to be satisfied with a baker's dozen.

(1) Most scholars will say that they are too busy to produce works beyond the completion of their daily round of tasks. To these let me cite that great man and teacher, David Starr Jordan, who, during a trying life as the president of a university, has never ceased to produce thoughtful works—fairy tales for children, peace pamphlets, histories, scientific books, tomes on recent and fossil fishes. I admire old Dave. When he was asked how he, half blind, could keep up such a continual stream of publications, he replied that he deserved no credit—that he only did it because he wanted to. He had an incentive.

(2) Poverty is frequently a companion of scholarship. Many scholars are obliged to be continually on the lookout for odd jobs to eke out the slender incomes they derive from scholarly pursuits. Many times such a condition is not justified;

scholars are often too simple-minded and use too little intelligence in the consideration of means for making a livelihood. Summer teaching, night work and other money-making expedients impede scholarship. Many worthy scholars forsake their chosen fields and gain larger incomes as administrators because a growing family or a desire for a few more luxuries demands more money. One has a certain sympathy for a poor man, but no one can respect a rich fellow who does little or nothing and holds a scholar's position because it gives him an honorable place in society.

(3) Laziness is often associated with scholarly ability. Bright people often do little, partly because they feel themselves already superior to their duller associates. Teachers, once established, commonly have too assured a position and may therefore become slothful.

(4) Stupidity ought never to be harnessed with scholarship, but unfortunately it is. The fact that scholars are usually poorly paid makes it seem proper for very average personalities to enter upon careers as teachers or researchers. They may begin in minor rôles but after years of "faithful service" attain positions of responsibility.

(5) Poor writing and speaking may handicap persons who are otherwise creditable scholars. Such men may have sound knowledge and brilliant ideas, but receive little credit or are exploited by less able minds because they lack ability to express themselves.

(6) Small-mindedness may be a congenital limitation or a habit. Some scholars might be great if they would consistently spend some time thinking about big things.

(7) Popularity may prevent potentially great personalities from becoming what they might. Many a good fellow fritters away his life talking to admiring students or being entertained by his friends.

(8) Formality and tradition often kill genius. A scholar may attend so seriously to learning and teaching what others know that he never is able to think for himself. Scholars have always taken pride in knowing what they were expected to know and felt disgraced if they were found to be ignorant of some bauble of learning.

(9) Love of learning for learning's sake is the rock on which some founder. A keen intellect may be satisfied by mere learning and expertness, without production. This is, of course, intellectually sinful.

(10) Cowardice keeps many a scholar from amounting to something. A man fears to be original "on account of his job," to be laughed at on account of his false pride or to encounter many of the other little trials which come to all men who try to do something.

(11) Abnormal standards, too high or too low, prevent scholarly accomplishment. One man provides himself with fine instruments and does excellent work, but never publishes anything because he sees that he will be able to do better next time. Another carelessly makes a few hasty observations, writes a poor account of his findings and is unable to secure a publisher.

(12) Conceit is often a fault of scholars. When one is continually deferred to as an "authority" he may finally come to feel that he is somebody and, worse, that he knows something. Thus a scholar is ruined.

(13) Lack of encouragement dampens the ardor of many an enthusiastic scholar who might be a producer. Administrative officers are often reluctant to furnish equipment or grant time for scholarly pursuits. A man to do something must have an environment that permits accomplishment. However, slothful persons often wrongly blame conditions outside themselves. If there is a will to do, the thing may usually be done anywhere.

The writer has attempted to discuss obstacles to scholarship. It is difficult in modern civilization for potentially great personalities to think great thoughts. A man has to spend too much time being like everybody else. A scholar to-day is, as he probably always has been, a learned, respectable, at times lovable, usually very human fellow who is almost never great. Scholars are seldom leaders because learned, useful, respectable, socially established persons, who are perhaps a little conceited and a trifle cowardly, can not afford to be too great or too original. They may be dislodged from their secure tenures. So scholars continue to be the vain, lazy, poor, formal fellows that they have always been. I have a certain sympathy for society when it puts me in my place. I deserve the salary I get.

Until it is possible to change teachers and schools so that education is primarily for learning to think and do, rather than for learning to know and remember, scholars and teachers will not have high places in society. They will remain necessary and useful. The slogan (Oh, shades of Kiwanis!) must be, not "Longer and Better Memories," but "Quicker and More Critical Thinking." We teachers must think of expedients for fostering ourselves as original and resourceful thinkers. Until we do that we must, like Chanticleer, be satisfied to let our little cries awaken civilization's barnyard to the old routines and allow powers beyond and above ours to raise the sun. If you ask me how to bring about the millennium we all desire, I can not answer. I am only a modern teacher who longs to be a scholar. I am too dumb. However, I tentatively suggest that we teachers take up the thinking of great, original thoughts. (I suppose we had best keep most of these to ourselves.) The rest of the world will greet this innovation at times mirthfully and at times wrathfully, but we must try to think. Some of us will succeed!

# EDUCATIONAL EVENTS

## THE EMPLOYMENT OF HIGH-SCHOOL TEACHERS IN GREAT BRITAIN

AT the request of the president of the British Board of Education, representatives of the joint committee of the four secondary associations held an informal consultation on March 14 with Mr. E. H. Pelham on the question of the supply of teachers. According to a report in the London *Times* the most important fact which emerged from the discussion was that, apart entirely from the demand which the education (school attendance) bill will create, if and when it is passed, more than a thousand teachers, over and above the normal supply, will be required to carry out the schemes of reorganization consequent upon the Hadow Report. In the education estimates for the coming financial year provision is being made for an increase of 1,250 in the numbers of "adult full-time teachers in regular employment," at an extra cost of £600,000. As regards the still greater number of teachers who will be required if the school age is raised to fifteen, the representatives of the secondary associations made it clear that they would not feel justified in cooperating to augment the supply from secondary schools until the education bill was actually on the statute-book.

A study of the memorandum on the Board of Education estimates for 1930 shows an increase of £990,000 in the assured expenditure on higher education of local education authorities for 1930, as compared with 1929. The present estimate allows not only for a normal increase in expenditure on secondary schools, but also for the loss of income caused by the raising of the normal upper limit for free places from 40 to 50 per cent. Provision has also been made for an increase in aid to students, for a continuance of the expansion of the facilities of technical and other part-time instruction of young persons, and for a growth in loan

charges. The total cost of higher education is up by £1,479,379. The number of secondary schools charging no fees in October, 1929, was 72 out of 1,349. The total number of pupils in the 1,349 in October, 1929, was 401,505, of whom it is estimated that 218,676 paid fees, and 182,829 did not; 63.9 of the schools charged fees exceeding eight guineas, but not exceeding 15 guineas. The cost of pensions to teachers in 1930 is up by £328,900—from £5,024,800 to £5,353,700. But under "Appropriations in Aid" it is found that the contributions of teachers in 1930 are estimated at £2,610,000, and employers' contributions at the same figure, a total of £5,220,000. Though the education estimates are up by £3,809,754, the cost of administration and inspection is up by £7,742 only. The staff of the Board of Education is being reduced from 2,131 to 2,115. It is stated that the cost for 1930 is lower than for any year since 1919–20, and the ratio of this cost to the board's expenditure is lower than has been recorded for any previous year in the history of the department.

## JUVENILE COURTS

THE Federal Children's Bureau, according to a report to the *U. S. Daily* made by E. M. Pollard, secretary of the department of public welfare of the state of Nebraska, recently made a survey of 42 juvenile courts in various parts of the United States for the year 1927.

The total number of cases handled by these courts during that year was 46,750. The number of dependency and neglect cases was 12,150, and the number of delinquency cases was 28,387. During the year 1927 these same courts released or discharged from probation or supervision 6,213.

Of the delinquent boys who passed through these courts 94 per cent. came from homes where either both parents or one or the other parent was living. Of the delinquent girls who passed through these courts 85 per cent. came from homes where either both parents or one or the other parent was living.

Of the delinquency cases, both boys and girls, 35 per cent. were placed on probation in their own homes; 39 per cent. were placed on probation in a foster home or boarding home; 15 per cent. only were committed to institutions for delinquent children; the other 12 per cent. were disposed of in various other ways.

As of January 1, 1930, there were 1,584 dependent and neglected children in private and state institutions in Nebraska under 18 years of age. There were 576 delinquent children in state and private institutions, making a total of 2,160 dependent and delinquent children under 18 years of age in private and state institutions.

Mr. Pollard points out that "if our juvenile courts followed the practice of the 42 courts above described we would have 15 per cent. of these children handled in institutions instead of practically 100 per cent. Instead of 2,160 children, at a cost of $822,960, we would have 324 children in institutions at a cost of $123,444. Also, we would have 35 per cent. of these 2,160 children—or 756 children—on probation at a cost of $30,240."

Children can be cared for in a boarding home at less than $1 per day. Taking this figure as a basis it would cost the state to supervise 35 per cent. or 756 children on probation, $275,940.

Adding together the 15 per cent. placed in institutions at a cost of $123,444 and the 35 per cent. supervised on probation at a cost of $30,240, and the boarding of this 35 per cent. at $1 a day, or a total of $275,940, there is a grand total of $429,624 under the system followed in these 42 courts as against a total cost under the present system of $822,960, or a net annual saving of $393,336.

The trend in the different states is toward prevention of crime through supervising the delinquent child. All of the correctional institutions are full to overflowing.

It is much easier to keep the child from becoming a criminal than to cure the criminal after he reaches adulthood. It is the duty of the state to guarantee to the underprivileged child an opportunity for normal development.

The natural place for a child to develop is in the home, and in its own home where at all possible, or where that is impossible in a foster home under supervision. A child who is committed to an institution, whether an institution for dependent or delinquent children, is under a handicap when it leaves that institution.

When permitted to grow up in a home the

child naturally adjusts itself to normal living, which it can not do when brought up in an institution, no matter how well the institution is managed.

## FINANCES OF THE BOSTON SCHOOL SYSTEM

The Boston School Committee, according to a report in the Boston *Evening Transcript*, has presented to the legislative Committee on Municipal Finance a request for legislation authorizing a school building program for one year which, excluding other requests for appropriation for the same purpose, would amount to $3,860,000. If the legislation is enacted the School Committee will have available for construction purposes approximately $5,000,000, the difference being represented by the other requests mentioned.

Senator Frank W. Osborne, chairman of the Municipal Finance Committee, suggested that before the new proposal is considered by his committee it be turned over to the Boston Finance Commission for its inspection, inasmuch as that body would be interested in the subject. The School Committee's request is a sequel to indications that the legislative committee would abandon consideration of the bill providing for a $15,000,000 three-year building program.

Chairman Joseph J. Hurley, of the School Committee, agreed to the suggestion, although he qualified his endorsement by remarking that the request made by the committee to a degree relates to educational questions, such as the necessity for the construction of given buildings, but, he added, matters relating to construction costs certainly come within the scope of the Finance Commission's duties.

The Municipal Finance Committee was told that if the building program is put through, additional high, intermediate and elementary school facilities will be provided to such an extent as to remove the necessity of adding further portable schools and eliminate as well many rooms which are not suitable for school purposes.

The School Committee presented a statement showing that the balance for general school purposes has fallen from $620,525 in 1926 to $279,165 in 1929. At present $6.97 per $1,000 of the city's valuation is allowed for general school purposes, and the committee wants an additional thirty cents. The legislators were told that the School Committee figured so close in the computation of the thirty cents that of it only seven cents is allowed for normal expansion and the graduated increase in teachers' salaries.

## BEQUEST TO DEPAUW UNIVERSITY

DePauw University is the beneficiary to the extent of at least $1,500,000 by the will of the late John H. Harrison, of Danville, Ill., according to later announcements regarding the bequest. The university will receive the bulk of his estate, estimated as approximately $2,000,000.

This is the largest sum ever given to the university by a single alumnus. The late Edward Rector, for whom DePauw's famous scholarships are named, made gifts of $3,500,000 to the institution, but he did not attend DePauw. A gift of $1,000,000 from the late Frank J. Hall, of Kansas City, Missouri, was made last year.

Mr. Harrison, publisher of the Danville *Commercial-News*, was a trustee of the university. He was born in Lebanon, Indiana, and graduated from DePauw in 1891. He was a newspaper reporter in Chicago for three years, did publicity work for three years, and later removed to Danville, where he acquired and consolidated four papers, becoming one of the most successful publishers in his state. His newspaper experience, however, began as an office boy under his father when the latter owned the Lebanon *Pioneer*.

The will provides that the executors shall turn over to DePauw, first of all, $250,000 for a college building to be named John Harrison hall. A sum of $300,000 as a trust fund, the income to go to Mrs. Harrison during her lifetime, will become at her death a part of the permanent endowment of the university.

A gift of $200,000 to the Lake View Hospital at Danville, and a sum of $10,000 to the children's home at Danville, were other gifts. The remainder of his estate is to be turned into cash or securities, and given to DePauw for its permanent endowment, with no restrictions as to how it may be used. The $250,000 for a new building, the $300,000 trust fund, the $200,000

for the hospital and $10,000 for the children's home are separate from this residual bequest.

Dr. G. Bromley Oxnam, in commenting on the gift, said: "It was made largely, I believe, because of his friendship for Mr. Roy O. West, president of the board of trustees, and also because he had gained a knowledge of the needs of the university through his service as a trustee. We are very much elated here, since it will enable the university to give greater service. We estimate that the amount will be about $1,780,000, although we have no definite figures as yet."

## THE COLLEGE OF LIBERAL ARTS OF NORTHWESTERN UNIVERSITY

FIRST steps in plans for the development of the college of liberal arts at Northwestern University, in conformance with recommendations of the faculty, Dean C. S. Yoakum and President Walter Dill Scott, were taken on March 26 by the board of trustees of the university.

The plans include the adoption of a new salary scale for the faculty of the college, limitation of the number of students, appointment to the faculty of ten additional outstanding men, freshman survey courses, supervision of instruction, appointment of a director of admissions and departmental examiners, creation of new scholarships and fellowships and investigations of the sources of students.

The action came as the result of an investigation by a committee of the board, headed by James F. Oates, appointed to consider the needs of the college and the best use of the $8,500,000 bequest to the college by the late Milton H. Wilson, a Chicago manufacturer.

The new salary scale recommended by President Scott and approved by the trustees, approximately 33 per cent. higher than that now in effect, is as follows: professors, $10,000 to $7,000; associate professors, $7,000 to $5,500; assistant professors, $5,000 to $4,000; instructors, $3,500 to $2,400. Immediate increase in the salaries of deserving members of the present faculty was also approved.

The faculty report also pointed out that the curriculum of the college of liberal arts should be "reordered in harmony with present social instruction and to accord with the current views of the organization of knowledge." A freshman survey or orientation course for next year was authorized, to be followed later by other such courses. Special emphasis also was placed in the faculty recommendations on the importance of making adequate provision for research.

An innovation in the college will be the appointment of departmental examiners to investigate the degree to which the desired aims of the various departments of the college are achieved. For this purpose one or more men will be relieved of other responsibilities and given authority to make such investigations.

It was the opinion of the board of trustees that none of the principal or income from the Wilson fund be used for the construction of new buildings, although it was recognized that to get the full benefit from the endowment there is a pressing need for an immediate building program calling for an expenditure of $12,500,000.

## JUNIOR RED CROSS COURSES

THE project programs of the Junior Red Cross are now being used by 165,000 teachers throughout the United States as the means of bringing the ideals of sympathy, sacrifice and service into the regular routine of the school room.

During the summer an opportunity for teachers in the east, west and middle west to further equip themselves with Junior Red Cross information and material will be offered in the form of special courses.

To those attending George Peabody College for Teachers; Teachers College at Columbia University; University of California, and College of Education at University of Wisconsin the following dates mark the Junior Red Cross courses:

June 9–27—George Peabody College for Teachers, Nashville, Tennessee. Credit one point. Given by A. L. Schafer, Ph.B.

July 7–26—Teachers College, Columbia University, New York, N. Y. Credit one point. Given by A. L. Schafer, Ph.B.

June 30–August 8—University of California, Berkeley, California. No credit. Given by Miss Mary Concannon.

July 22–August 8—College of Education, University of Wisconsin, Madison, Wisconsin. No credit. Given by T. B. Shank, A.M.

These courses, of approximately three weeks' duration, comprise eighteen lectures covering the origin and history of Junior Red Cross, its purpose, educational possibilities, application to the curriculum of the local school and relation to county activities and health projects. The international development of Junior Red Cross with resultant international exchange of school work, compositions, letters, maps, art work, etc., will be included.

In addition, approximately 160 summer normal schools will have on their programs special representatives of the Junior Red Cross who will spend two or three days demonstrating the way in which Junior Red Cross general activities fit in with regular classwork in English, geography, physics and other studies.

## ALUMNI EDUCATION

Charles H. Brown, librarian of Iowa State College, is chairman of a special committee on alumni education, according to an announcement from American Library Association headquarters.

Twelve members comprise the committee which is to study the library implications of alumni education, with attention to the part to be played by college and public libraries, state library commissions and the relation of these to each other.

Organized as a sub-committee of the College and Reference Section of the American Library Association, it includes, in addition to Mr. Brown: Milton J. Ferguson, of the California State Library, Sacramento; C. B. Joeckel, department of library science, University of Michigan; Clarence B. Lester, secretary, Wisconsin Free Library Commission, Madison; President W. M. Lewis, Lafayette College, Easton, Pa.; W. P. Lewis, Wesleyan University Library; Charles E. Rush, Teachers College Library, Columbia University; Miss Nell Unger, Reed College Library, Portland, Oregon; L. R. Wilson, University of North Carolina Library, Chapel Hill; President H. M. Wriston, Lawrence College, Appleton, Wisconsin, and as associate members, Matthew S. Dudgeon, Public Library, Milwaukee, and F. K. W. Drury, executive assistant, adult education department, American Library Association, Chicago.

With no formal report on its program, this group plans to study the possibilities of alumni education in relation to the library, and to interest university, alumni and college library leaders in this project. Members of the committee will meet for discussion on June 27 at the Los Angeles conference of the American Library Association.

The present organized interest in alumni education is closely allied to four educational experiments now being promoted through grants from the Carnegie Corporation at Lafayette College; Lawrence College, Appleton, Wisconsin; the University of Michigan, and Vassar College. Each institution is interested in working out a different project for its alumni, with the "alumni college," a reading service, discussion groups and week-end conferences as the major objectives.

The growing ramifications of alumni education will be discussed at three future meetings of national significance: the meeting of the American Alumni Council at Amherst, May 1–3; the Chicago convention of the American Association of Adult Education, May 12–15, and the American Library Association convention at Los Angeles, June 23–28.

## OREGON AND ARKANSAS SURVEYS

Upon invitation, the United States Office of Education is conducting surveys of higher educational institutions in Oregon and in Arkansas under the direction of Dr. A. J. Klein, chief of the division of higher education.

In Oregon the old board of higher curricula has been abolished and a single board has been set up in control of all the higher educational institutions of the state. Prior to the formulation of a new policy, the board invited the Office of Education to make a survey of all higher public institutions and this is now in progress. A series of fourteen questionnaires has been sent out, including two student questionnaires and one addressed to graduates of the state institutions of the past ten years.

The commission in charge includes President George A. Works, of Connecticut Agricultural College; President Frederick J. Kelly, of the University of Idaho, and Dr. Klein. During April the technical staff is summarizing, digesting and issuing supplementary material for statements to be used as a basis for the field

inquiry which is to be conducted in May. The technical staff includes Dr. Palmer Johnson and Dr. Noll, of the University of Minnesota, Dr. Lindsay, of the University of Pittsburgh, Dr. Benner, now visiting at Teachers College, Columbia University, and Dr. B. W. Frazier, of the Office of Education.

The Arkansas survey has covered the state university, the two state teachers colleges, the four state junior colleges and the state college for negroes. It was undertaken by the Office of Education upon invitation of Governor Parnell, State Superintendent Claude M. Hirst and the presidents of the higher institutions. The commission is made up of President William B. Bizzell, of the University of Oklahoma; Dean John W. Withers, of the School of Education, New York University, and Dr. Klein. The technical staff has included Dr. Billett, of the Ohio State University, W. T. Middlebrook, comptroller of the University of Minnesota, and Dr. Frazier, of the Office of Education. The report of the commission and staff is now being written and will be published this summer.

# EDUCATIONAL NOTES AND NEWS

ACCORDING to a press dispatch, Dean Walter Williams, of the school of journalism of the University of Missouri, will succeed as president of the university Dr. Stratton D. Brooks, who has been granted a leave of absence until his term ends. Professor Frank Lee Martin will become head of the school of journalism. The curators are said to have acted because of faculty dissensions.

FREDERIC W. SCOTT has been elected rector of the University of Virginia to succeed Cyrus Harding Walker, who resigns after eight years' service.

CLYDE LATEN LYON, for eighteen years professor of English at the Northern Illinois State Teachers College, De Kalb, has been elected to the presidency of Eureka College.

DR. JEREMIAH E. BURKE, who entered on his ninth year as superintendent of the Boston Public Schools last November, has been reelected for a term of six years.

SUPERINTENDENT WILLIAM J. O'SHEA'S term of office as superintendent of the New York City schools expires on April 30, and it was expected that he would be re'ected for a term of six years by the Board of Education this week. Dr. O'Shea will not complete a full term, as he will reach the retiring age of seventy years in October, 1934.

JOHN H. DYER, superintendent of Scranton, Pennsylvania, public schools, was the guest of honor at a testimonial dinner give recently by teachers of Scranton. Over 900 teachers attended. John Beaumont, principal of the Technical High School, was toastmaster. The following were speakers: John H. Williams, representing the Scranton School Board; Gerald F. Harrington, president of the Scranton Branch, Pennsylvania State Education Association, representing the school principals, and Sarah M. Evans, representing the grade teachers of the city.

THE cross of the Legion of Honor has just been bestowed upon Mrs. Joseph Thomas Jones, of Buffalo, by the French government in recognition of her work to promote the study of the French language in the United States. Mrs. Jones gave $125,000 to the University of Buffalo to establish a chair in French to be filled by a native Frenchman, whose assistant must be French-born. She also gave $50,000 to Mount Union College for the same purpose.

FORMER PRESIDENT EMILIO PORTES GIL, of Mexico, now Secretary of the Interior; Miguel de Unamuno, Spanish scholar and a former rector of the University of Salamanca, and Henri Bergson, French philosopher, will be awarded doctorates honoris causa by the University of Mexico.

THE University of Dublin will confer the degree of LL.D. on William Macneile Dixon, Regius professor of English literature at Glasgow University, and the Litt.D. on Leonard Woolley, the archeologist, and Otto Jespersen, formerly professor of English at the University of Copenhagen.

MR. FRANCIS B. HAAS, formerly state superintendent of public instruction of Pennsylvania, president of State Teachers College, Bloomsburg, was elected president of the Northeastern Convention District of the Pennsylvania State Education Association at the Bloomsburg meeting on March 7.

DEAN R. L. SACKETT, head of the school of engineering, was elected president of the Penn State Chapter of Sigma Xi, national research society, following installation of the chapter at the Pennsylvania State College.

PROFESSOR ROBERT E. BROWN, who became a member of the faculty of the Graduate School of Theology of Oberlin College last September, has now been officially assigned a title. He will be known as professor of practical theology and human relations. His professorship is made possible by the gift from an anonymous donor of $100,000.

DR. LEONARD B. KRUEGER, associate professor of economics at Oberlin College, has tendered his resignation effective at the end of the college year. Dr. Krueger has accepted the position of chief statistician of the Wisconsin State Tax Commission with headquarters at Madison, Wisconsin. He is on leave for the present year, having been awarded a "grant in aid" by the National Social Science Council to complete writing a book, "The History of Financial Institutions in Wisconsin."

DR. J. STEWART BURGESS, head of the department of sociology at Yenching University at Peiping (Peking), China, has been appointed associate professor of sociology at Pomona College, Claremont, California.

RAY L. HUFF, principal of the Moorehead Elementary School of Pittsburgh, and a specialist in juvenile delinquency, has been named by Governor Fisher, of Pennsylvania, as director of the bureau of restoration, State Department of Welfare. Mr. Huff succeeds B. L. Scott, who resigned in September to accept a position with a prison welfare association in Philadelphia.

MR. JOHN L. HORSLEY, of the class of 1909, has been elected alumni secretary of Simpson College to fill the vacancy occasioned by the resignation of Loren C. Talbot last June. For five years Mr. Horsley was promotion secretary and business manager of the central office of the Epworth League, Chicago, and was an instructor at Epworth League institutes.

DR. CLARENCE C. LITTLE, formerly president of the University of Maine and of the University of Michigan, has been made a trustee of the board of Rivers School, Brookline, Massachusetts.

L. S. MAYO, assistant dean of the Harvard Graduate School of Arts and Sciences, has been granted a leave of absence for the coming academic year. George K. Zipf has been appointed acting dean.

SECRETARY RAY LYMAN WILBUR was the principal speaker at the annual banquet of the Progressive Education Association which was held in Washington on April 4.

DR. FRANK L. MCVEY, president of the University of Kentucky, delivered the principal address at the annual meeting of the North Central Association of Schools and Colleges in Chicago on March 20. His subject was "Administrative Relations in Colleges." Dr. McVey also expects to address the fifth annual meeting of the American Association for Adult Education in Chicago on May 14, on "The Relation of the Fine Arts to Adult Education."

ON Tuesday, April 29, at 8 p. m., there will be a public lecture in English at Harvard University by Professor Torquato Giannini, of the University of Rome. He will speak on "Virgil and Navigation."

PROFESSOR CAMILLO VON KLENZE, formerly of the College of the City of New York, now professor of American civilization at the University of Munich, will lecture on April 15 at Harvard University on "Geistige Strömungen im heutigen Deutschland."

DR. GEORGE B. CRESSEY, professor of geology and geography at Shanghai College, China, gave a series of five lectures on the geography of China at Clark University, commencing on March 31. Dr. Cressey is spending his sabbatical year as research associate at Harvard University and instructor at Clark University.

A SERVICE in memory of Mary Whiton

Calkins, research professor of philosophy and psychology, will be held in the Memorial Chapel of Wellesley College at half past three on Sunday afternoon, April 13.

JOHN A. BROWNING, founder and for forty years head master of the Browning Preparatory School for Boys, died on April 1, in his seventy-sixth year.

THE death is announced on April 2 of Dr. Karl Pietsch, professor emeritus of Romance philology at the University of Chicago, at the age of seventy-one years.

DR. CHARLES DANIEL TENNEY, one of the original members of the Oberlin-China mission, died on March 15. In 1886 he opened the Anglo-Chinese School in Tientsin, one of the first schools using American methods in China. In 1895 he was commissioned to organize the Imperial Chinese University, which he did and became its first president. In 1906 he resigned from the Imperial University and the Chihli schools to direct the Chinese students in America.

ARRANGEMENTS are being made for holding an International Congress of Philosophy at Oxford next September. The last congress was held at Harvard University in 1926. The date of the congress will be September 1 to 5. Accommodation will be provided at the Oxford colleges. Inquiries should be addressed to the secretary, Mr. A. H. Hannay, at 74, Grosvenor Street, London, W.1.

THE British Society of Czechoslovakia proposes to arrange the vacation courses of Central European culture for English-speaking travelers in Europe. The Prague Summer School consists of two courses of lectures held in Prague from July 21 to 30, and in Carlsbad from August 1 to 10, respectively. Their aim is to give an outline of central European, particularly Czechoslovak, civilization for those who wish to gain a clear idea of the spiritual currents in central Europe.

THE fifteenth annual meeting of the National University Extension Association will be held in the Pennsylvania Hotel, New York City, on May 7, 8 and 9.

PENNSYLVANIA'S annual Vocational Conference will be held at Eagles Mere near Williamsport, on June 26, 27 and 28. Over five hundred vocational teachers are expected to be present at this conference in addition to a number of city directors of vocational education, superintendents of schools and school directors. The following four fields of vocational education will be represented: agriculture, continuation, home economics, and industrial and practical arts.

IN June of the present year the Polytechnic Institute of Brooklyn will celebrate the completion of its seventy-fifty year, having opened its doors in 1855. It thus ranks among the first half dozen engineering schools in the United States in point of seniority of foundation. In commemoration of the completion of three quarters of a century of service the institute will bestow its first honorary degree at commencement upon Rear-Admiral Richard Byrd.

THE new two-story nursery, dental clinic and playground built at the cost of $100,000 in Brooklyn by Mr. August Heckscher, will be opened with dedication ceremonies on May 1. Mr. Heckscher will present the finished building to the people of Brooklyn; Robert Rust, president of the trustees of the Heckscher Foundation, and the Right Rev. John C. York, of St. Brigid's Church, Brooklyn, will preside. Addresses will be made by state and city officials, business leaders and philanthropists. The center, which will be an extension of the Heckscher Foundation at Fifth Avenue and 104th Street, is the first project under the provisions of the $4,000,000 fund furnished by Mr. Heckscher to provide institutions in the congested areas of Brooklyn, Manhattan and the Bronx. It is estimated that the budget of the new center will be about $16,000 a week.

PHILLIPS EXETER ACADEMY has received a gift of $1,000,000 from Colonel William Boyce Thompson, '90, of Yonkers, N. Y., according to an announcement made by Lewis Perry, principal, at the opening of the spring term of the academy. The use of the sum is unrestricted, and can be applied as the trustees deem best. Colonel Thompson is the school's greatest benefactor, already having given funds for the gymnasium, swimming pool, baseball cage and

running track which aggregate nearly $1,000,000. Besides these gifts Colonel Thompson also gave $500,000 for the construction of a science and administration building, which will be started soon.

HALF a million dollars is left to Teachers College, Columbia University, $100,000 each to the Metropolitan Museum of Art and the Henry Street Settlement and smaller sums to other institutions by the will of V. Everit Macy, banker and philanthropist, who died at Phoenix, Ariz., on March 31.

THE will of the late William H. Nichols, chairman of the board of the Allied Chemical and Dye Corporation, bequeathed $1,000,000 to public purposes. Mr. Nichols left half of his residuary estate to New York University for the maintenance of the Nichols Chemical Laboratory, which he gave to the institution in 1927. He requested that the bequest be used to keep the laboratory "at all times in good order and repair and well equipped." Mr. Nichols served as acting chancellor of the university last spring and fall during the illness of Chancellor Brown. The largest institutional legacy was $250,000 to the Polytechnic Institute of Brooklyn. Mr. Nichols attended that school for three years in his youth, and was vice-chairman of its board. The American Chemical Society and the American Society for the Control of Cancer each received $50,000.

THE family of the late Rosa and Jacob Stern have given $100,000 to develop the department of music of the University of California. The fund will be known as the Rosa and Jacob Stern Musical Fund.

THE board of directors of the University of Kansas City has voted to accept the $100,000 site for the projected institution given by Mr. William Volker and to name the campus after him.

MRS. CASPER H. ROWE, of Cincinnati, has given $25,000 to the University of Cincinnati to establish a loan fund for faculty members.

A RESOLUTION adopted in 1925 barring gifts from the General Education Board, a Rockefeller institution, to the University of Wisconsin was rescinded by the board of regents on March 5.

THE Duc de Richelieu has presented the Château de Richelieu, which was built by the Cardinal, to the University of Paris as a place of rest for members of its staff. Members of foreign universities will also be invited to make use of the house and estate. The town of Richelieu, where the Cardinal was born in 1585, is about 12 miles from Chinon in the Loire Valley. The castle was built to the designs of Jacques Lemercier in 1631. Other country houses and estates, planned to harmonize with the castle, sprang up around it by order of the Cardinal, who induced courtiers and members of his family to establish themselves there, and Richelieu is now one of the most beautiful country towns in France.

THE Board of Supervisors of Westchester County, New York, has adopted a resolution petitioning the state legislature to amend the county education law to permit the establishment of a Westchester university. The board has, however, no immediate project in mind, but considers it advisable to have enabling legislation ready.

THE department of statistics of the University of Denver School of Commerce, headed by Dr. A. D. H. Kaplan, is conducting a campaign to educate both mothers and fathers in the care of infants. The Visiting Nurses Association and public health nurses and persons in the medical profession are aiding the department. The need for such a campaign was felt when a report on maternal and infant mortality was given at a meeting of the Visiting Nurses Association recently by Dr. Kaplan. He presented figures showing that 91 out of every 1,000 babies born in Denver die.

LEGALITY of the action of the school committee of Barnstable, Mass., in removing Carlton E. Wheeler as superintendent of schools is upheld by Attorney J. J. Ronan, of Salem, appointed auditor by the Supreme Court, on a petition of Wheeler for a writ of mandamus to compel the committee to restore him to his former position. Attorney Ronan's report was filed in Barnstable County. Wheeler claims he was illegally removed, but the auditor found that the petitioner failed to prove his contention that the board was actuated by bad faith. He also finds that the vote for dismissal—a two thirds

vote—fulfilled the requirements of the statute and was legal.

THE American School Citizenship League offers two sets of prizes, to be known as the Seabury prizes, for the best essay on one of the following subjects: (1) Open to students in normal schools and teachers colleges, "The Teacher's Opportunity to Strengthen the Kellogg-Briand Pact." (2) Open to all students in secondary schools, "How would World Peace benefit the Youth of the World?" Three prizes of seventy-five, fifty and twenty-five dollars will be given for the three best essays in each set. Information in regard to the conditions of the contest can be obtained from Dr. Fannie Fern Andrews, 295 Commonwealth Avenue, Boston, Massachusetts.

THE International Council of Religious Education, representing the cooperative work in religious education of forty-two Protestant denominations, has appointed a committee to begin the preparation of educational films for use in churches. It is planned that these motion pictures shall be an integral part of the curriculum of religious education which is being prepared by the council. The publishing houses of the several denominations are making arrangements to establish an organization which will represent their interests in the production and sales of motion-picture films and equipment, thus assuring the employment of experts in serving the churches in this field.

THE British government, as reported in *The Christian Science Monitor*, has decided to increase materially the small number of state scholarships now given to boys without means of their own to facilitate their attending university courses. This is in consequence of the remarkable scholastic record which holders of these endowments prove to have set up. Sir Charles Trevelyan, minister of education, replying to a question in the House of Commons on January 30, said the system of state scholarships at the universities for pupils from state-aided secondary schools had fully justified itself. There were 200 state scholarships awarded annually and only 11 per cent. of the scholars had failed to obtain either first or second class honors degree. The subsequent careers of scholars who had already finished their course had been generally very satisfactory. Since 1920 the number of entrants for scholarship examinations had increased from 1,000 to 3,919 in 1929. He had made inquiries from the examining bodies who awarded state scholarships, and was assured the number of candidates at their examinations who reached the standard for scholarship was considerably greater than the number of scholarships available. The government, accordingly, proposed to increase the number of scholarships available for the award each year by 50 per cent., making the number 300 instead of 200. This increase is to come into effect this summer.

THE net cost per child of elementary education in England and Wales for the year 1928–29 was 15s. 1d. more than in 1927–28 and 13s. 9d. more than in 1926–27, states a White Paper issued by the Board of Education, the amounts per child being respectively £12 10s. 5d., £11 15s. 4d. and £11 16s. 8d. The cost per child in the County of London in 1928–20 was £16 11s. 4d.; other counties, £10 16s. 7d.; county boroughs, £11 8s. 3d.; boroughs, £10 14s. 2d., and urban districts, £13 1s. 8d. The average attendance in public elementary schools in 1928–29 was 4,909,044, and the total net expenditure was £61,471,959. It is pointed out that the circumstances which determine the cost per child differ widely from one area to another. In the counties (excluding London) the highest average net expenditure per child in 1928–29 was in Middlesex, £15 2s. 11d., and the lowest in the Soke of Peterborough, £9 5s. East Ham is highest among the county boroughs with £16 12s. 9d., West Ham coming next with £15 18s., and the lowest is Grimsby, £9 6s. 2d., which is 6d. less than South Shields. Among the boroughs, Hornsey is highest with £18 8s. 11d. and Whitehaven lowest with £8 6s. Beckenham heads the list of urban districts with £17 19s. 6d., Hebburn being lowest with £8 15s. 9d.

ACCORDING to a report of the Education Committee of the London County Council, quoted in the *Journal* of the American Medical Association, there are 48,943 fewer children of elementary school age in London than two years ago. Since 1915 the total number of children has declined from 898,439 to 717,917. The number of children born in 1914 who survived

was 99,497; in 1918 in consequence of the war the figure had fallen to 64,998. In 1920 the figure was 113,539, but in 1928 it had fallen to 67,473.

THE first number has appeared of a quarterly journal called *Oversea Education*, published by the Oxford University Press for the secretary of state for the colonies. It aims at encouraging educational research and experiment in tropical and subtropical areas. Information and criticism on what is being considered and attempted will thereby be placed at the disposal of education authorities and those interested in education in those areas. It is hoped that this will stimulate inquiry and at the same time prevent time and money from being wasted on investigating schemes that have been tried and found wanting or regarding which full information is already available.

THE London *Times* reports that the work of the children in the schools of Northamptonshire has resulted in the production of a new map of the county. Each parish has been surveyed field by field, and the surface utilization recorded on parish maps. Under the guidance of their teachers the work was done largely by the children of the elementary schools themselves: even the younger ones were able to take a share. The six-inch ordnance survey maps were used as a foundation for the work. Traced copies of parish areas were prepared in school. First visits were made to check and (where necessary) correct field boundaries and add new buildings. Classes or groups of children were allotted sections of work and provided with a tracing of the portion of the parish upon which they were to work. They made their notes in the field by means of symbols or shading on the map. After checking, the parish map was completed in water-colors. The survey has aroused a new interest in the local area. The children really explored the areas in which they live. They gained a knowledge of maps and how to use them in a practical way. Farmers showed considerable interest in the progress of the work, and many gave help. The completed map has been printed by the Ordnance Survey Office, Southampton. It is in three sheets on the one-inch scale. The distribution of cultivated land, pasture, woodland and waste is shown in color. There is seen to be much difference in the amount and distribution of cultivated land in parts of the county. Accounting for these differences raises interesting problems. A distribution of the map will be made to all schools which took part. The work covers 305 parishes and is unique in being the first map of its kind for a whole county.

IN accordance with the policy adopted by the Secretary of the Interior, Dr. Ray Lyman Wilbur, ninety-seven Indian children on the Winnebago and Omaha reservations, and those nearby in South Dakota who have heretofore been attending government Indian boarding schools, have been transferred to the public schools of the region. A letter to the Commissioner of Indian Affairs from the school board of Macy, Nebraska, the community that will receive the largest number of these children, says: "The public school board of the sixteenth school district of Thurston County, Nebraska, in which is located the town of Macy with a school of ten grades, has gone carefully over the list of students belonging in Indian homes that your supervisor of Indian education has designated should attend public school and wishes to say that we welcome them to our public school. We will cooperate in any way possible to keep them in school and to encourage other Indian children attending this public school and other public schools in this section. Our observation over several years leads us to be of the opinion that it is better for the Indian children to be in public school rather than a government school thereby sooner attaining the white man's view-point."

# DISCUSSION

## THE COOPERATIVE GROUP PLAN

DR. HOSIC in the January 4 issue of SCHOOL AND SOCIETY has given a very suggestive and stimulating article on the "cooperative group" plan of organization in the elementary school.

He applies a principle that is fundamental

for effective organization and for the productive study of pupils and the adaptation of educational activities to their needs. It is the antipodes of isolation and fragmentariness in school economy. It involves concentration on the study of common interests and at the same time distribution of work according to the special aptitudes and skills of different members of the cooperating group. The principle has wide application in different directions and for different ends. In a normal school study some years ago the conclusion seemed clear that one phase of cooperative grouping could be used with great advantage. In place of one overnumbered and unwieldy corps of instructors cooperative groups would be more educative because they permit a distribution of students so that every teacher can come into intimate contact and acquaintance with every student in the group. There is a point in the growth in numbers beyond which increase outstrips the most effective uses of educational forces and so entails waste both professional and financial. Coordinate grouping supplies a natural remedy and is sure to issue in greater social and educational results. The same principle is guiding the Harvard authorities in planning the new "house" organization made possible by the Harkness endowment.

Concretely Dr. Hosic has in mind an organization of this general type. Instead of the ordinary separate class organizations groups of contiguous classes are formed. Their teachers become group "faculties," to a large extent self-directing. One member of a group faculty acts as administrative leader. Each member has charge of more than one subject of study, but never of more than a small fraction of the program. She is thus saved on the one hand from the distraction and superficiality incident to teaching a dozen subjects and on the other from the narrowness of concentration on a single subject. She has the inspirational advantage of giving herself to a broad and enterprising development of teaching technique in connection with work in a comparatively small field that especially appeals to her, and she has her room specially equipped for the work of which she has charge. She has particular oversight of one class which meets her at the beginning and close of each school day. The rest of the time she devotes to teaching her special subjects to the different classes in the group which come to her at specified times during the day.

Such an organization facilitates efficient administration of school affairs. Under it the school is a federation of cooperative groups rather than an aggregation of separate classes. Each group studies and administers its particular province. Cooperative study and administration is more thought stimulating and inspiring and so more productive than isolated work. This method of organization provides superior conditions for meeting and fostering the individual interests and development of pupils and providing associations which will stimulate the best growth, whether of the forward or the backward child. In fact, the problem of the backward child will at least be largely reduced. The individual interests of teachers also will have greater scope and effectiveness.

Since reading Dr. Hosic's article I have been trying to consider its application to some of the organization and administration details of the school program. Aside from being a more effective organization for the educative disposition of numbers it seems to promise several gains in other directions and several worthwhile economies.

1. A significant improvement in supervision. This is largely because it emphasizes supervision from within in place (in part at least) of supervision from without. The group is in a way an autonomous unit, self-determining within certain limits. As already indicated, it assumes responsibility for organizing and administering the work of the classes involved. The group cooperates in making programs, determining curricula and study courses and legislating on the social and educational interests and needs of the classes entrusted to it. All this affords unexcelled opportunities for growth in educational thought and power. New incentives and new inspirations are added to the otherwise essentially mechanistic organization of elementary school grades.

The ideal in administration is an intimate grouping, a kind of homelike association in which pupils lead and are led into a wealth of absorbing activities which foster initiative and clarify motives. The cooperative group organization provides better conditions for physical improvement, educational growth and character development. It relieves the demand for outside supervision, general and special, and suggests to school authorities a reduction in such supervision now overdone or at any rate functioning imperfectly and wastefully. It would thus result in a worth-while saving of school moneys.

2. Rare opportunities for intimate contacts and individual studies that facilitate adaptations to meet individual needs and attitudes. It combines the best features of grade organization with the best of departmental organization and produces something better than either. The plan relieves the pressure of the mechanizing process that is almost inevitable in ordinary grade administration under which pupils are whisked from one feature to another, in the effort to accomplish the day's program, without giving time to linger over an idea, fact or activity long enough to assimilate. Haste destroys deliberation and scrappiness usurps the place of consecutive pursuit of an interest. The freer organization of the cooperative group permits it in higher degree to legislate for itself in close relations to its problems without distracting pressure from below or from above. The ordinary grade scheme leaves the contents of pupils' minds a more or less unorganized mass of things relevant and irrelevant. Coordinate grouping facilitates the realization of meanings and relations and the more thorough pursuit of productive ideas.

3. The group principle makes curriculum revision more educational. Speaking in the large, curriculum revision to date has consisted in keeping the old and grafting on it many new buds without cutting away enough to make a symmetrical and effective whole. This is not good tree culture, much less good child culture. There has been some syncopation, it is true, but a thoughtful glance at the resulting product is enough to show how inadequate an instrument has resulted for reaching the objective we call education. Much of it is still dictated by adult rather than child interests. Close and intimate study by the group is likely to produce more practical and at the same time more educational suggestions.

4. In equal degree the group principle will improve the most recent addition to our school program, the so-called extracurricular activities. This new term has been one to conjure with, but it has been one that has tended to handicap the value of the thing it conceals. It is to be feared that school people have often grasped the name without the substance—that there has been too little effort to adapt these activities to age, needs and development. Such activities require just as careful organization and administration as any school activity, for they are as essential and as worthy of solicitous observation and development as any part of the curriculum; otherwise they should be discarded. Dr. Hosic's suggestive grade organization, for the same reasons noted in the last paragraph, supplies a more hopeful organization for a more healthful development of the miscalled extracurricular activities.

5. Text-book reform. The annual waste in the purchase of text-books may easily be reckoned in seven figures to which must be added the educational waste. Text-book methods substitute information for knowledge. They supplant first-hand study of things. They also encourage the employment of many poorly trained teachers who find it essential to assign lessons from books and teach from books, thus bounding their activities within text-book limits.

The text-book industry is a close parallel of the automobile industry. To keep the business moving new models come from the book factories faster than an accommodating public can reasonably absorb them and encourage displacement where the old is not out of date and has not completed reasonable service and where the owner can ill afford new equipment. Such displacement is an indefensible drain upon the public treasury. Frequently the new can not justify itself by any significant advance over the old and sometimes even is inferior. The organization suggested by Dr. Hosic creates responsible groups finely adapted for studying text-book economics constructively because

of closer relations to the whole problem. More than this, it should develop more fully a study of things and direct activities incident to such study into more absorbing and useful channels, and so cut loose, as occasion arises, from a narrow and narrowing text-book servitude. All this will reduce text-book bills.

If more time and expense were devoted to perfecting some of our present books and making them really suitable for grade pupils much would be gained. Let us begin with our geographies.

6. Methods. It is patent from what has been said that the new organization would encourage more vital methods built upon principles of education and not on fancy. It should dignify methods over devices—keep devices from obscuring method. It should also develop clearer distinction in thought and practice between means and ends.

7. It is likely that waste in time and materials will be noticeably relieved. Cooperation of the immediate agents in education, in which superior spirits lead the way, stimulates thought and invention and lends the incentive and inspiration of responsible participation. All this gives far better conditions for studying and practicing economies compared with those offered by a separatist and remotely functioning organization. Results will in part depend upon success in arranging groups and placing in each group teachers who have talent for leadership and a mind for school economics and the reduction of overhead. The two qualifications need not be combined in the same personality. The possibilities for inaugurating economies in educational programs are enormous.

The matter of federating the coordinate groups suggests matter enough for a separate article and opens up interesting issues.

One of Professor John Dewey's most significant theses is "that power of initiation and constructive endeavor . . . is necessary to the fulfilment of the function of teaching. . . . Only by sharing in some responsible task does there come a fitness to share in it." The cooperative group plan is clearly in line with this thesis.

FRANK WEBSTER SMITH

## LANGUAGE REQUIREMENT FOR THE DOCTORATE OF PHILOSOPHY

IN SCHOOL AND SOCIETY for March 8 there is an article by George H. Betts called "Language Requirements for Doctors of Philosophy." There is one phase of this mixed and unsatisfactory situation with regard to a foreign language requirement for doctors of philosophy which is not mentioned in the article.

Is it not possible or even probable that much of the hostility expressed towards the language requirement is due to the fact that the persons thus expressing themselves never really had a reading knowledge of a foreign language? Many took their foreign language work in a system which did not emphasize reading ability, or scattered attention over all aspects of a foreign language with the result that after a year or two of study the student interested in other subjects dropped the language as soon as his requirement was met, without having acquired any single definite skill. This is certainly true of candidates who took their foreign language work in ordinary undergraduate courses.

Candidates who worked up their reading knowledge by themselves or with the help of tutors naturally did as little as possible in the hope that the examiner would be easy on them. I have conducted a good many foreign language examinations for doctors of philosophy who were meeting their requirements. Many of them felt the requirement was a technicality and a nuisance. They expected the examiner to feel sorry for them and make the examination as perfunctory as possible. If their attempts were not accepted as satisfactory and they were told they must try it again, many of them took the situation with bad grace.

The suggestion has been made that one language be required instead of two, and that the requirement be a real one and not a burlesque. For the one-language-instead-of-two part of the program there will be great enthusiasm, but for making the requirement a real one there will be much less approval.

As I implied at the beginning, if methods of instruction, especially for university students who will study foreign language not more than two years and frequently only one year, were changed so that emphasis will be upon reading,

the candidates ought to feel much less dissatisfaction than at present.

It is worth noting also that it is not the foreign language department that has set up the foreign language requirements for doctors of philosophy. Foreign language departments are not thrown into ecstasy by the necessity of having to administer a requirement which is so unpopular.

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# SPECIAL CORRESPONDENCE

## THE RISE AND PROGRESS OF THE COLLEGE OF EDUCATION OF THE UNIVERSITY OF MINNESOTA

SCHOOLMEN'S WEEK, a well-established annual feature at the University of Minnesota, will be held this year from April 14 to April 18. From whatever angle this event is regarded it promises to be an outstanding one in the educational annals of the northwest. The galaxy of distinguished speakers and educators whose names appear on the official program would ordinarily be sufficient to ensure an appreciative audience. But this year provides an additional attraction that can not fail to arouse a sympathetic response in the hearts of hundreds of enthusiastic students and alumni of the university. The occasion is the celebration of the twenty-fifth anniversary of the founding of the College of Education. The preliminary announcements indicate that every effort is being made to provide a program worthy of the achievements and the ideals of the college and of the university of which it is an important part. The main theme is "Twenty-five Years of Minnesota Educational History." The title though comprehensive is peculiarly fitting, for it is difficult to suggest any important phase of the state's educational policy and activities which, for the past quarter of a century, has not been vitally influenced by the College of Education. The full significance of this important educational institution can best be understood in the light of its history, which will be briefly told in this paper.

As early as the year 1851, the second territorial legislature of Minnesota would appear to have had some vague idea of bringing teacher training directly under university auspices. At any rate it granted the University of Minnesota a charter which contained a provision for "a department of the theory and practice of teaching." For reasons that need not concern us here the proposed Territorial University never materialized and many years were to elapse before the struggling state university found itself in a position which warranted its offering courses in education—to use the modern term which has all but displaced the earlier and more limited pedagogy. In the meantime, normal schools were opened in different parts of the state; Winona in 1860, Mankato in 1866 and St. Cloud in 1869. These performed useful service in training teachers for elementary schools and in arousing an interest in the professional preparation of teachers.

For a couple of decades public secondary education had an uphill struggle, but in 1878 an epoch-making law was passed that made a modest appropriation for public high schools. The stimulus was sufficient, however, to give the needed impetus to public secondary education. Year by year the enrolment in the public high schools increased and in turn the attendance in the university increased likewise. The relations between the university and the high schools, at all times close, were mutually helpful. Graduates of the public high school soon became the chief source of supply for the university, and the university graduates in increasing numbers were becoming teachers of the high schools; but during the early eighties in Minnesota, as elsewhere, it was generally assumed that if a student had studied a subject in college he was capable of teaching it in high school. Definite preparation for teachers on the secondary school level was not considered an essential condition for a successful teaching career.

The need for a higher type of training gradually became evident. As early as 1887, Professor Maria Sanford delivered a course of ten university lectures in education. Incidentally

it may be remarked that the name of this inspiring pioneer teacher and cultured lady is fittingly commemorated in Sanford Hall, a residence hall for women students attending the university which she served so faithfully for many years.

The next attempt to provide courses in education on the university level was made in 1891, when Dr. Harry Pratt Judson, later president of the University of Chicago, was appointed professor of history and pedagogics. Dr. Judson's course of lectures on education was delivered in the College of Science, Literature and Arts.

In the year 1892–93, the university's efforts to train teachers were brought into more direct contact with the public schools through the appointment of Dr. D. L. Kiehle as professor of pedagogy. For a number of years Dr. Kiehle had rendered valuable service as state superintendent of public schools. In his new capacity, he organized a curriculum and offered a two years' course in education. Graduate work on a limited scale would appear to have begun in 1895–96. In 1895, the teachers' university certificate issued by the department of pedagogy was made valid for a certificate of the first grade, and regular graduates of the department of pedagogy of the university were entitled to become teachers of the students enrolled in the teacher-training courses which had been established in the villages and cities of Minnesota.

Thus the department of pedagogy was gradually becoming a recognized factor in training of teachers and school officers, but no important development occurred until 1905 when a law was passed and approved on April 7, providing that "it should be the duty of the Board of Regents of the University to organize and establish as soon as practicable, a teacher's college, or department of pedagogy for the purpose of providing proper professional training for those persons who intended to become public and high-school instructors, principals and superintendents of schools."

The College of Education was formally opened in 1906 with Dr. George F. James as dean, and Mr. Albert W. Rankin as one of the original faculty members. Mr. Rankin's experience as a state school inspector led him to appreciate the value of making provision for student teaching under supervision. In the training of elementary school teachers such experience was provided in the schools associated with normal schools. Cadet teaching for high-school teachers, however, was then something novel. Nevertheless, Mr. Rankin's suggestion regarding the desirability of making provision for practice teaching was favorably received, with the result that the University of Minnesota High School was established in close association with the College of Education. In addition to his other duties, Mr. Rankin acted as first principal of the university high school and supervised the practice teaching of the student teachers.

The early years were not favorable to rapid growth, and it looked for a time as if the College of Education was destined to remain an appendage to the College of Science, Literature and Arts. By 1913, however, there began a steady drift not merely towards enrolment in education courses, but towards specific professional preparation for the teacher's calling. While many students continued their residence in the liberal arts college and carried courses in the department of education, there was evidence of a definite shift towards registration in the College of Education itself, but for several years the programs of many students in the liberal arts college and in the College of Education were practically identical.

This condition of overlapping continued until June, 1916, when the board of regents took definite action to bring about "the unification of all teacher training in the university" and officially designated "the College of Education as the organ upon which responsibility for teacher training is placed." The outcome of this decision was momentous. All teacher training courses were placed in the College of Education. Previously such courses were taken in various schools and colleges of the university; in the College of Science, Literature and Arts; in the College of Agriculture, Forestry and Home Economics; in the College of Engineering; in the School of Chemistry, as well as in the School of Education.

Through the action of the board of regents and the subsequent action of the faculties of the various schools and colleges concerned, all candidates for the university teachers' certifi-

cates were required to register in the College of Education at latest by the beginning of their junior year. Since 1918–19, the College of Education has enrolled freshmen and sophomores as well as students of the two upper classes. The intentions of the regents, though somewhat delayed by the war-time conditions, were fully realized in 1919 when the College of Science, Literature and Arts excised from its bulletin the distinctly professional courses in education and ceased to enroll students who wished to qualify for the teachers' certificate. Since 1920, students preparing to teach agriculture, forestry and home economics were also required to enroll in the College of Education.

Since 1913–14 the growth in enrolment has been rapid. In that year the total number of students enrolled was 112, made up of 32 juniors, 33 seniors and 27 unclassified students. In 1917–18 the enrolment was 199. The following year freshmen were enrolled for the first time and the enrolment jumped to 286. The enrolment for the year 1928–29 totalled 1,795, made up of 167 freshmen, 170 sophomores, 535 juniors, 560 seniors and 363 unclassified students.

Compared with other leading schools of the university, the College of Education since 1925–1926 has occupied the premier place for the number of its graduates. For 1928–29 the figures were:

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|---|---|
| School of Education | 469 graduates |
| Science, Literature and Arts | 405 graduates |
| Medicine (including Nursing) | 382 graduates |
| Engineering | 172 graduates |
| Agriculture and Home Economics | 137 graduates |
| Business Administration | 131 graduates |

Corresponding with the increase in undergraduate enrolment there has been an increase in the number of graduate students of education. In 1912 there were but four master's degrees in education. In 1917 one doctor's degree and six master's degrees were conferred. In 1929 the number of Ph.D. degrees was eight and the number of masters twenty-seven. Altogether since its organization there have been conferred on students of the College of Education thirty-eight Ph.D. degrees and two hundred and ten master's degrees.

Impressive as are the increases in graduate and undergraduate enrolment and in the number of students engaged in graduate research these are by no means the only evidences of the character of leadership and service which the College of Education has rendered the cause of education throughout the state of Minnesota and beyond its borders. Its graduates serve in public and private schools in all sections of the country.

Like other progressive educational institutions, its strength and achievements are due to the scholarship and character of its faculty. Many of these have attained national distinction in their special fields. It is impossible here to do more than refer to a few who have occupied administrative positions and consequently have had a share in molding the policy of the institution. Dr. Fletcher Harper Swift joined the faculty in 1909, was acting dean in 1914–1915, and rendered valuable service until his resignation in 1925. The year 1915 is especially notable in the history of the college, for in that year the following important additions were made to the faculty: Dr. L. D. Coffman, as dean (later elected president of the university); Dr. M. E. Haggerty, as professor of educational psychology (later appointed dean of the college), and Dr. W. S. Miller, as principal of the university high school (later appointed professor of educational psychology).

The productivity of the faculty has been noteworthy. Educational literature has been enriched by such contributions as the following: Dr. F. H. Swift's, in the field of school finance; Dr. L. V. Koos's, in secondary education; Dr. Fred Engelhardt's, in school surveys; Dr. Van Wagenen's, in educational diagnosis; Dr. Finney's, in educational sociology, and Dr. Huddleson's, in college problems.

In general, it may be said that the educational services of the College of Education may be classified as follows:

(a) Training high-school teachers.

(b) Giving professional preparation to supervisory and administration officers of public and non-public schools.

(c) Providing training in service for teachers, principals and superintendents through short courses and summer school.

(d) Training research workers.

(e) Productive scholarship.

(f) Investigating problems of local and national interest in the field of education.

(g) Cooperating with the state department of education and with private educational institutions in various ways.

(h) Extending educational service by means of school surveys.

(i) In general, giving that vital educational leadership so necessary at a time when the field of education is dynamic in character.

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# QUOTATIONS

## LORD BALFOUR'S CONTRIBUTION TO EDUCATION IN ENGLAND

THE death of Lord Balfour on March 19 removes the foremost figure in the revival of English education. Apart altogether from his Parliamentary achievements in the cause of education, his character and mind, in their frequent touch with all the phases of higher learning, added a leaven of reality and intrinsic harmony to intellectual movements. He peered behind the day-by-day usefulness of intellectual endeavor. The unity of all education is a practical product of his philosophy and sense of harmony. He carried this harmony and philosophy into the fierce regions of politics, more fierce in his Parliamentary career than at any other time since the Long Parliament, and in the sphere of education he laid, with cool impartiality that won the admiration and the allegiance of Joseph Chamberlain, the bases of the whole of our modern educational system. It will not be amiss to draw attention to the educational chaos that preceded the reforms of Arthur Balfour. In July, 1895, the Liberal-Unionist Party came into office with a majority of 152, and Balfour was First Lord of the Treasury and leader in the House of Commons. At that date education was at a low ebb. It was controlled by local school boards and voluntary school managers, and both parts of the dual system created by the acts of 1870 and 1876 were starved. But progress had been made during the conservative administration that began in 1886. The Education Code Act of 1890 gave the first glimmerings of higher education under the school board system, of which the London School Board was not slow to take advantage, as the famous Cockerton case showed, while the act of 1891 on fair terms gradually abolished the payment of fees by the parents of elementary school children. But the conservative administration created in other and fundamental ways changes that rendered possible Balfour's great act of 1902. Despite the weighty burden of the Chief Secretaryship for Ireland, Balfour played a great part in the passing of the Local Government Act, 1888, which created or re-created the system of county councils and county borough councils throughout England and Wales. The local government system was completed under Lord Rosebery's administration in 1894. The Local Government Act of 1888 was followed by the Technical Instruction Act of 1889. When the Unionist Party gained office in July, 1895, the starved schools were helped by the Elementary Education Act, 1897, and the Voluntary Schools Act, 1897, but it was clearly impossible to do more without a complete change of system.

Balfour's plan of making the new local authorities the authorities for education throughout the country was embodied in the bill introduced in 1902, but before bringing that bill to life he created by statute in 1899 the Board of Education as the central point of the new system by merging the Science and Art Department at South Kensington and the Education Department at Whitehall, thus at one stroke making the unity of all education possible. The new board had all the educational powers of the Charity Commissioners, and, combined with the secondary educational powers vested by various acts in the borough and county councils, supplied an occasion for general legislation. The time had come for creating the machinery of a great educational system dealing both with primary and secondary education, a system which would draw into itself and reinvigorate rural education and give equal educational opportunities of the widest kind to chil-

dren of both sexes. The bill roused the bitter opposition of the Non-conformist and Radical element in the House of Commons, despite the loyal support of Joseph Chamberlain. It took up no fewer than fifty-two sittings of Parliamentary time, but after the application of the closure it became law on December 18, 1902. Balfour himself launched and personally directed the passage of the bill, which not only gave the local authorities great educational powers and destroyed the school board system, but gave needed relief also to the voluntary schools by bringing them inside the system without destroying their denominational character. The principle was extended to London in the next year, and made education national in a sense that it had never been before. Growth was implicit in every clause of the act, and when the education act, 1918, came it was based entirely on the act of 1902 and the developments that that act had made possible. Balfour was more than a skilful statesman in this educational crisis. He saw the educational position as a whole, from the Board of Education which he had created to the smallest county or voluntary school, and he was determined to evolve a system which in the course of years would give England and Wales no excuse for not producing the best educated democracy in the world. It was a stern conflict, but throughout Balfour was, as Chamberlain said, the life of the whole movement: no leader could be "more courageous in action, more loyal to his colleagues, more courteous to his opponents."

The bases which Balfour laid no succeeding Ministry has ever wished to destroy. As the heat and turmoil of the conflict slowly died down, it was found that in the working of the new education all depended not on denominational bitterness, not on party politics, but on hard administrative work hand in hand with the enthusiasm of the teaching profession. That profession took up at once the possibilities of their task and passed through further days of miserable stipends without bitterness because they saw that the day had dawned. At last in the war it was seen that the question of salaries must be grasped, and then followed the education act of 1918, the Burnham scales, and the settlement of the salaries question. It was fortunately not too late to make this essential development of the new scheme of education. The local authorities, the churches and the teachers are beginning to work together, and that new unity is the result of the creative system which sprang from the fertile brain of Balfour. There are in front of us many developments: the questions of nursery schools, of raising the school age, of new administrative developments which will finally destroy what is known as "elementary" education, of linking up all grades of education to the universities and technical colleges. These changes all spring from Balfour's philosophic conception of the unity of all education and his singular administrative and statesmanlike ability, which, with the suavity of complete conviction, managed by the sheer effort of personality to place the acts of 1899 and 1902 and 1903 on the statute-book. Balfour stood above politics in this matter of education. He appealed to the reasonableness of political thinkers and administrators, and his reward is that at the present time we have the best educational machinery in the world, and should have after the next twenty years that educated democracy which he longed for. Balfour lifted education out of the range of party politics, and it is the duty of succeeding statesmen, of whatever political complexion, to keep it free of party. This will be his best memorial.—*The London Times.*

# EDUCATIONAL RESEARCH AND STATISTICS

## USE OF THE NORMAL CURVE AS A BASIS FOR ASSIGNING GRADES IN SMALL CLASSES

MANY writers on tests and statistics have cautioned teachers against assuming that the achievement of students in small classes is symmetrically distributed. It may be true that one can expect the abilities of individuals in large groups to be distributed much as are height and weight in the general population, that is, in accordance with the normal probability curve, but this expectation does not hold in classes of

thirty or forty. In spite of this emphasis the practice is wide-spread for teachers to give a relatively constant percentage of A's, B's, C's, etc., to class after class, making only very minor adaptations for their differences in size, interest and aptitude.

It is believed that this practice results in part from the fact that few if any concrete illustrations have been given of what happens when a large group, in which achievement may be normally distributed, is sectioned or divided into several smaller groups. Teachers might agree that, if such sectioning were the result of chance factors, the distribution of achievement would be less symmetrical in the smaller groups, but few have a realization of the extreme asymmetry which is actually brought about. If teachers had a knowledge of the true situation, they would recognize at once the unfairness of reporting, for every class, very nearly the same percentages of letter or numerical grades. It is in an attempt to present an objective view of the problem of the distribution of marks in small classes that the following brief statement is made. The first part is devoted to a presentation of data resulting from the operation of chance factors upon a division of cards, and the second deals with the distribution of grades in each of a large number of sections.

If one considers a class of one hundred students among whom achievement is distributed according to the well-known normal probability curve, it probably would be fair to give 8 per cent. of the group A, 24 per cent. B, 36 per cent. C, 24 per cent. D and 8 per cent. E. If this group were divided into four sections of twenty-five students each, the question arises as to what per cent. of the students in each of these smaller classes would receive A, B, C, etc. Teachers who give but slightly varying percentages of each grade to one class after another are acting upon the assumption that the achievement of the students would still be symmetrically distributed in the smaller groups. Such, however, is far from the truth. To illustrate this contention the results of dividing a large number of symmetrically marked cards are given in Table I. One hundred cards, 8 per cent. of them marked A, 24 per cent. B, 36 per cent. C, 24 per cent. D and 8 per cent. E were well shuffled and dealt into four piles. The percentage of each letter grade in each of the four piles was then tabulated. This was done five times, with the result that twenty individual groups were obtained, each with its own distribution of grades. Reference to Table I will show that the variations from group to group were very large. Three of the twenty groups contained no A's and the same number contained 12 per cent. of A's. Similarly the percentage of B's ranged from 8 to 40, C's from 28 to 52, D's 8 to 32 and E's 0 to 20. These extreme variations in the grades found in the smaller groups occurred, it should be remembered, even though the grades in the large group from which the smaller groups were

TABLE I

ONE HUNDRED SYMMETRICALLY ASSIGNED GRADES AS DISTRIBUTED FIVE TIMES BY CHANCE INTO GROUPS OF TWENTY-FIVE

| Per cent. of A's | No. of groups | Per cent. of B's | No. of groups | Per cent. of C's | No. of groups | Per cent. of D's | No. of groups | Per cent. of E's | No. of groups |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3 | 8 | 1 | 28 | 1 | 8 | 1 | 0 | 1 |
| 4 | 4 | 12 | 2 | 32 | 2 | 12 | 1 | 4 | 7 |
| 8* | 6 | 16 | 2 | 36* | 7 | 16 | 2 | 8* | 6 |
| 12 | 3 | 20 | 3 | 40 | 1 | 20 | 2 | 12 | 4 |
| 16 | 4 | 24* | 5 | 44 | 5 | 24* | 4 | 16 | 1 |
| | | 28 | 2 | 48 | 3 | 28 | 7 | 20 | 1 |
| | | 32 | 2 | 52 | 1 | 32 | 3 | | |
| | | 36 | 1 | | | | | | |
| | | 40 | 2 | | | | | | |

* Represents the percentage which is theoretically most probable.

selected were rigidly symmetrical. In not one of the twenty groups was the distribution of grades what it was in the large group, namely, 8 per cent. A, 24 per cent. B, etc.

The same results are found in the case of actual classes. The following data are taken from four sections of an elementary course in educational psychology for three semesters. The scores throughout the course were determined from new type examinations given to all the students. At the end of each semester, the final grades for all sections were made out on the assumption of a normal distribution of achievement among the 120 or more students, *i.e.*, a certain percentage of the students with the lowest scores receiving E, and so on. The effect which this practice has had on the distribution of marks in any one section is interesting. These marks are tabulated by sections in Table II, which should be interpreted in the same way as Table I, the only difference being that Table II represents actually obtained data. It can readily be seen that the variations in grades from class to class were very great. The percentage of A's ranged from 0 to 20; the percentage of B's from 12 to 36; of C's from 20 to 52; of D's from 0 to 28, and of E's from 0 to 20. These ranges are quite comparable to those obtained when one hundred cards were divided by chance into four equal groups.

There is a basis for assuming that achievement is distributed according to the normal probability curve only when the group under consideration is very large. The group of 120 used was certainly a minimum; it would have been much better had there been ten thousand students upon which to base a judgment. But even if there were ten thousand students in the original group sectioned, and even if one could be certain that achievement were normally distributed throughout its membership, smaller sections taken from the larger group would in no sense show symmetry. The larger the group becomes the more asymmetrical would be the smaller groups selected from it. Nor are these variations from symmetry negligible. They are so significant, in fact, that assigning even approximately the same grades to group after group can mean only one thing, that the grades are practically worthless as measures of achievement.

TABLE II

THREE HUNDRED AND SIXTY-FOUR SYMMETRICALLY ASSIGNED GRADES AS DISTRIBUTED IN EACH OF SIXTEEN SECTIONS

| Per cent. of A's | No. of groups | Per cent. of B's | No. of groups | Per cent. of C's | No. of groups | Per cent. of D's | No. of groups | Per cent. of E's | No. of groups |
|---|---|---|---|---|---|---|---|---|---|
| 0– 4 | 3 | 12–16 | 1 | 20–24 | 1 | 0– 4 | 1 | 0– 4 | 3 |
| 5– 8 | 5 | 17–20 | 4 | 25–28 | 0 | 5– 8 | 1 | 5– 8 | 4 |
| 9–12 | 2 | 21–24 | 2 | 29–32 | 0 | 9–12 | 2 | 9–12 | 3 |
| 13–16 | 1 | 25–28 | 2 | 33–36 | 2 | 13–16 | 0 | 13–16 | 1 |
| 17–20 | 1 | 29–32 | 2 | 37–40 | 3 | 17–20 | 3 | 17–20 | 1 |
| | | 33–36 | 1 | 41–44 | 0 | 21–24 | 3 | | |
| | | | | 45–48 | 2 | 25–28 | 2 | | |
| | | | | 49–52 | | | | | |

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